

Review

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opposite operations

$$+ \rightarrow -$$

$$\times \rightarrow \div$$

ex

$$3x + 6 = 12$$
$$\quad -6 \quad -6$$

$$\frac{3x}{3} = \frac{6}{3}$$

$$x = 2$$

When there are brackets, get rid of them first:

ex

$$2(x-3) = 8$$

$$2x - 6 = 8$$
$$\quad +6 \quad +6$$

$$\frac{2x}{2} = \frac{14}{2}$$

$$x = 7$$

Decimals:

treat the same as integers:

ex

$$\begin{array}{r} 1.2x - 3.3 = 5.1 \\ + 3.3 \quad + 3.3 \end{array}$$

$$\frac{1.2x}{1.2} = \frac{8.4}{1.2} \quad \leftarrow \text{use calculator}$$

$$x = 7$$

Fractions:

- get rid of fractions by multiplying all terms by lowest common denominator.

ex

$$\frac{2}{7}x - \frac{3}{2} = 1$$

LCD = 14
so mult by 14

$$14\left(\frac{2}{7}x\right) - 14\left(\frac{3}{2}\right) = 14(1)$$

$$\begin{array}{r} 4x - 21 = 14 \\ + 21 \quad + 21 \end{array}$$

$$\frac{4x}{4} = \frac{35}{4}$$

$$x = \frac{35}{4}$$